

KOEHRING MACHINE COMPANY

Cable Address
"KOEHRING" Milwaukee
Iron Age Code on page 8

Milwaukee, Wis., U. S. A.

Other Code Used
Western Union

Manufacturers of Concrete Machinery

CONCRETE MIXERS, PAVING MIXERS, BAR CUTTERS, BAR BENDERS AND ROTARY GRADERS

Sizes and Types of Koehring Mixers

Koehring concrete mixers are divided into two general classes—the heavy duty types, and the "Dandie" light mixers. The former are made in five sizes, having capacities of 7, 10, 14, 21 and 28 cu. ft. (0,2 0,3 0,4 0,6 and 0,8 m³) of wet concrete per batch, and the latter with capacities of 4 and 7 cu. ft. (0,1 and 0,2 m³).

Either type may be furnished with charging chute, batch hopper or power operated charging skip, and can be mounted on trucks or skids. They can be supplied with steam engine, steam engine and boiler, gasoline engine, electric motor, or can be arranged for belt or gear drive.

Koehring paving mixers are built in five sizes, having capacities of 7, 10, 14, 21 and 28 cu. ft. (0,2 0,3 0,4 0,6 and 0,8 m³) of mixed concrete. They are end charging and end discharging, with boom and bucket or spout distribution. Loading is by means of charging skips. These may be supplemented by loading derricks, which lift batch boxes from industrial cars or trucks and swing them over the skips.

Organization and Development

The Koehring Machine Company is the largest manufacturer of mixers in the world. It has every facility for rapid, standardized production, and, with large, well-stocked warehouses and an efficient service organization, is able to render its customers the utmost cooperation.

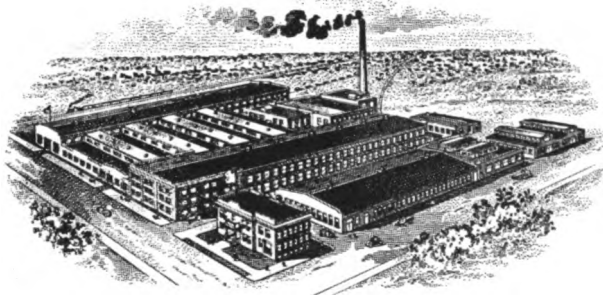


Fig. 1. The Koehring Machine Company Factory

Organized in 1907, at the time when concrete first came into general use, this Company followed closely the rapidly widening application of this material to various purposes, developing and improving its machines to keep pace with each new demand of service. As a result, Koehring mixers as built today, having developed with the use of concrete itself, are fully capable of meeting every requirement of modern concrete construction.

Koehring Heavy Duty Mixers

The Koehring heavy duty construction, carried out to the smallest detail, gives these mixers the extra margin of strength to endure continuous high-speed operation. Freedom from breakdowns is one of the most important factors in profitable mixer operation, a quality which has always been characteristic of Koehring mixers.

The increasing use of concrete construction for projects demanding permanence and a high factor of safety is creating a demand for methods of producing standardized concrete of uniform composition and strength.

Aside from using proper materials, the three most important essentials for standardized concrete are a mixing process which prevents the separation of the aggregates according to size, a means of measuring the proper amount of water, and thorough mixing.

The first of these is provided by the Koehring five-action re-mixing drum, which makes it certain that every particle of sand and stone is thoroughly coated with cement and prevents the segregation of the aggregates. The result is that every batch is uniform to the last shovel-ful.

The second factor—the proper amount of water to each batch—is under positive control by means of the Koehring automatic water measuring tank. This tank, shown in Fig. 2, is simple in design and construction and automatically delivers to each batch exactly the amount of water desired.

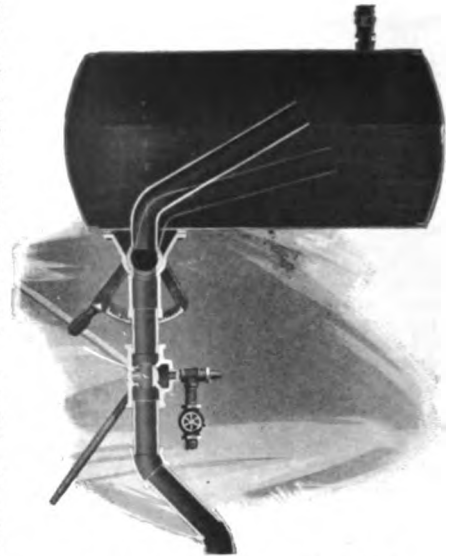


Fig. 2. Automatic Measuring Tank

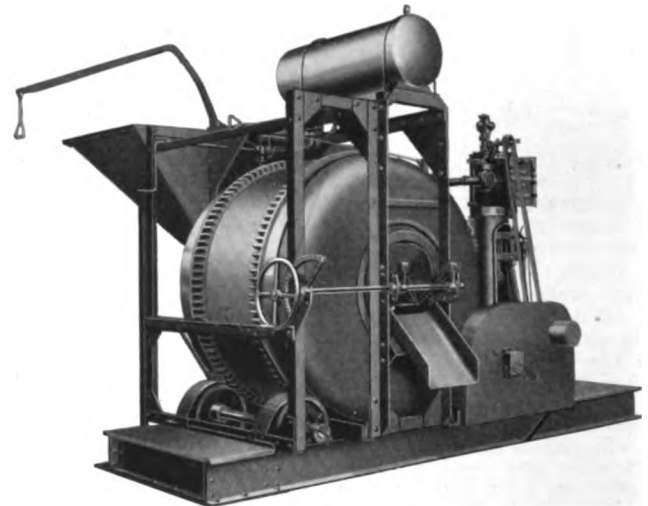


Fig. 3. Koehring Mixer, No. 28-S

Capacity, 28 cu. ft. (0,8 m³) of wet concrete per batch. Discharges plastic concrete in 16 seconds, sloppy concrete in 20 seconds. Equipped with batch hopper, measuring tank, steam engine and boiler; mounted on skids.

The third factor is controlled by the Koehring batch meter, a positive means for controlling the thoroughness of the mix. This device automatically locks the discharge chute as soon as the drum receives the materials. The chute cannot then be operated until the mixing time for which the meter has been set has elapsed.

Capacity

The standard method of rating mixers is on the basis of the quantity of mixed concrete which the drum will hold. This is at best only an approximation of the mixer's daily capacity, which is influenced by many factors of design and construction, and can only be arrived at by considering the mixer as a whole.

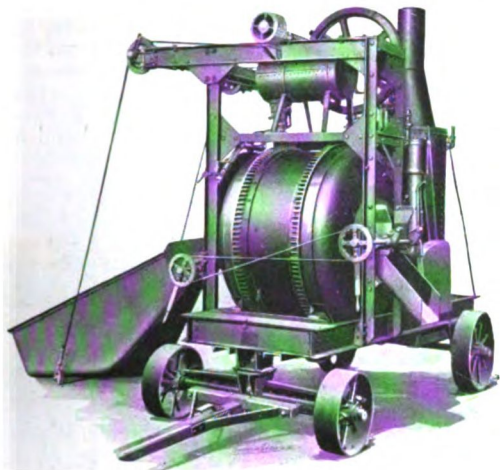


Fig. 4. Koehring Mixer, No. 21-S

Capacity, 21 cu. ft. (0.6 m³) of wet concrete per batch. Discharges plastic concrete in 15 seconds, sloppy concrete in 19 seconds. Equipped with charging skip, measuring tank, steam engine and boiler; mounted on wheels.

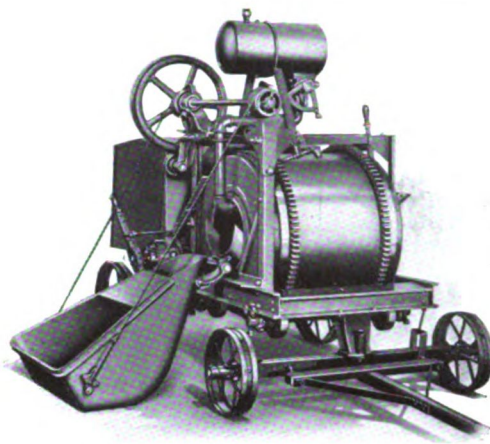


Fig. 6. "Dandie" Mixer, No. 104-S

Capacity, 4 cu. ft. (0.1 m³) of wet concrete per batch. Discharges plastic concrete in 10 seconds, sloppy concrete in 15 seconds. Equipped with charging skip, measuring tank and gasoline engine; mounted on wheels.

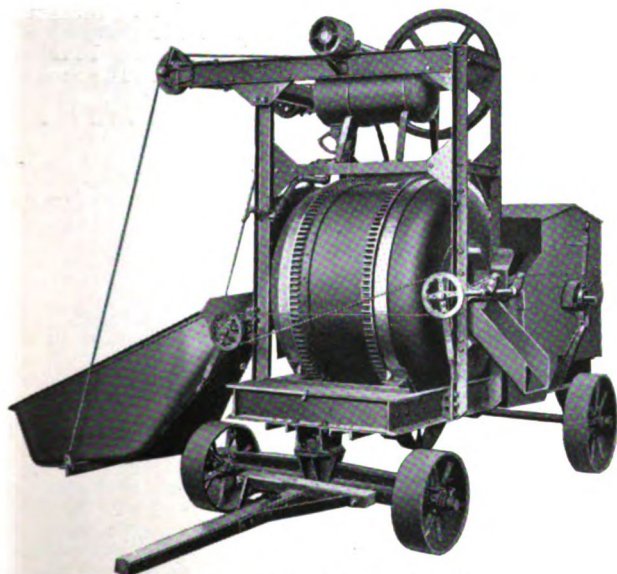


Fig. 5. Koehring Mixer, No. 14-S

Capacity, 14 cu. ft. (0.4 m³) of wet concrete per batch. Discharges plastic concrete in 13 seconds, sloppy concrete in 18 seconds. Equipped with charging skip, measuring tank, 10-h.p. gasoline engine; mounted on wheels.

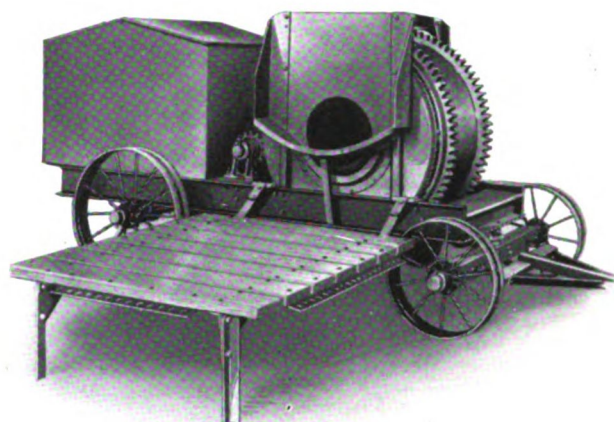


Fig. 7. "Dandie" Mixer, No. 104-S

Equipped with gasoline engine, charging chute and platform for charging with wheelbarrows.

TABLE I. CAPACITIES OF KOEHRING MACHINES
Heavy Duty Construction Mixers

No. of Mixer	Capacity per Batch			
	Mixed Material		Unmixed Material	
	cu.ft.	m ³	cu.ft.	m ³
7-S	7	0.2	10	0.3
10-S	10	0.3	16	0.5
14-S	14	0.4	24	0.7
21-S	21	0.6	32	0.9
28-S	28	0.8	44	1.5

Heavy Duty Paving Mixers				
10-E	10	0.3	16	0.5
14-E	14	0.4	24	0.7
21-E	21	0.6	32	0.9
28-E	28	0.8	44	1.5

Koehring "Dandie" Mixers				
104-S*	4	0.11	6	0.17
107-S*	7	0.20	10	0.28
214-E†	14	0.4	22	0.6

Koehring Hot Mixers				
14-S	14	0.4	24	0.7
14-E	14	0.4	24	0.7

Koehring Rotary Traction Grader				
Capacity per hour, based on 12-in. (30½ cm.) cut in steady operation, 100 cu. yd. (76 m ³)				
Koehring Bar Benders				
No.	Square-Twisted		Round	
	in.	mm.	in.	mm.
	0-1	25	0-1¼	32
No. 6A	0-1½	32	0-1½	38

Koehring Bar Cutters				
No. 1	0-3¼	19	0-3¼	19
No. 2A	¾-1½	28	¾-1½	32

*Construction mixer. †Paving mixer.

Koehring drum dimensions are extremely liberal compared to the batch rating. The remarkable daily capacity of Koehring mixers is due to the fact that every operation of getting the material into the drum and delivering the mixed concrete is accelerated to a high degree. This is brought about by a correctly designed skip, which is elevated to an unusually steep angle by means of an efficient clutch and cable arrangement, assuring fast charging; an efficient drum, which gives a thorough mix in a short time; a patented discharging chute, which quickly empties the drum; automatic action; the centralized, simplified control, by which it is easy for the operator to maintain high-speed operation.

"Dandie" Light Mixers

The "Dandie" light mixers fulfill the demand for light weight, easily portable mixers for general work, such as culverts, footings, sidewalks, curbing and other jobs within their capacity. They embody the same features of correct design and rapid operation as the larger mixers and are equally dependable.

A feature of these machines is the low mounting of the mixing drum, which makes it possible to load directly into the charging chute with wheelbarrows from a low platform.

Bar Cutters

These tools, for cutting concrete reinforcement bars, are light in weight, convenient to handle, effective in operation, and simple in construction. The cutting jaws are so arranged that the effective leverage increases toward the end of the cut; this results in a clean, square end.

The cutters, including the operating handle, are built entirely of steel, and are made in two sizes. With the smaller size, shown in Fig. 8, one man can easily cut bars up to $\frac{3}{4}$ in. (19 mm.), and with the larger, two men can cut $1\frac{1}{4}$ -in. (32 mm.) round or $1\frac{1}{2}$ -in. (29 mm.) square or twisted bars.

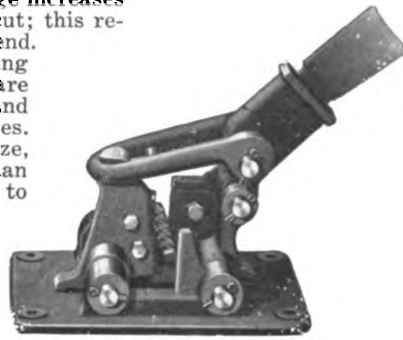


Fig. 8. Bar Cutter

Koehring Paving Mixers

Koehring paving mixers are specially designed for mixing and distributing concrete for roads and pavements. The same heavy construction and rapid operating speed which is characteristic of the stationary mixers is to be found in these pavers.

Special devices and attachments, however, further increase their speed and efficiency. The extra wide charging skip, power operated discharge chute, loading derrick, boom and bucket distributor, and the mixer loaders are all features which have a positive value in speeding up mixer operation.

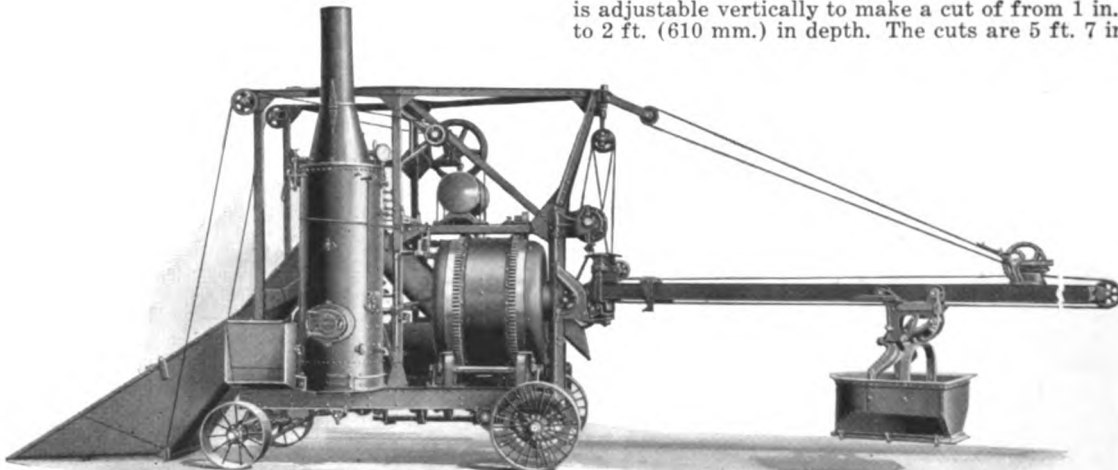


Fig. 9. Koehring Paving Mixer

Equipped with charging skip, boom and bucket distributor and power discharge chute; steam engine and boiler.

Bar Benders

Koehring reinforcing bar benders are also made entirely of steel, which gives them great strength with the least weight. They are made in two sizes.

The smaller size (No. 5) will bend bars cold up to 1 in. (25 mm.) square. The bending die is 2 in. (51 mm.) in diameter

and gives a bend with a 1-in. (51 mm.) radius on the inside. In order to avoid fracture by too great tension, the guide block is provided with a large roller, which allows the bar to follow freely.

The larger size (No. 6A) will bend bars up to $1\frac{1}{2}$ in. (38 mm.) round or $1\frac{1}{4}$ in. (32 mm.) square. The bending die is 3 in. (76 mm.) in diameter, which gives the bend a $1\frac{1}{2}$ -in. (38 mm.) radius on the inside. This bender, as shown in Fig. 9, is provided with a clamp which automatically adjusts itself to the thickness of the bar and securely holds it at one end. It is so constructed that, with direct leverage, one man can bend small bars, or, using the back gears, two men can bend large bars.



Fig. 11. Bar Bender

Koehring Rotary Grader

The Koehring rotary grader is a power-driven machine which moves forward under its own power, cutting out the roadbed and simultaneously elevating and loading the material into trucks or wagons alongside. The digging function is accomplished by a rotating cylinder, on which are mounted twelve herringbone-shaped buckets which carry teeth on their cutting edges. The excavated material is carried up by the buckets as the cylinder rotates and is dumped on a belt conveyor which extends out at right angles. Final discharge may be on either side of the machine. The machine is adjustable vertically to make a cut of from 1 in. (25 mm.) to 2 ft. (610 mm.) in depth. The cuts are 5 ft. 7 in. (1.7 m.)

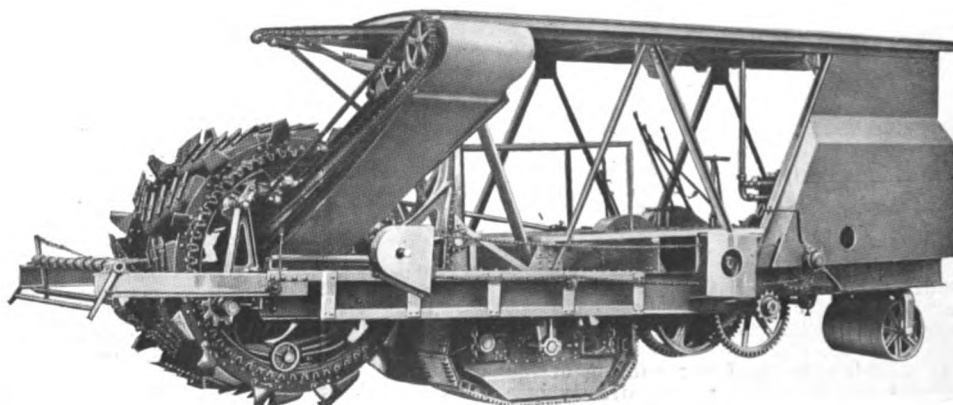


Fig. 10. Koehring Rotary Grader

MAQUINARIA PARA PREPARAR HORMIGON

Mescladores de Hormigón; Pavimentadores; Cortadores de Barras para Hormigón; Dobladores de Barras; Máquinas para Hacer Pendientes. Tamaños y Tipos de Mescladores "Koehring"

Los mezcladores Koehring se clasifican en dos categorías: los tipos para servicio extra-fuerte y los mezcladores ligeros. Los primeros se hacen en dos tamaños con capacidades de 7, 10, 14, 21 y 28 pies³ (0,2 0,3 0,4 0,6 y 0,8 m³) por "volcada" y los últimos se hacen en capacidades de 4 y pies³ (0,1 y 0,2 m³).

Las máquinas pavimentadoras Koehring se hacen en cinco tamaños con capacidades de 7, 10, 14, 21 y 28 pies³ (0,2 0,3 0,4 0,6 y 0,8 m³). Se cargan por un extremo y la distribución del hormigón puede hacerse por medio de tolva, canal u otro método adaptable.

Mescladores "Koehring" Extrafuertes

La construcción Koehring da a estos mezcladores un factor de seguridad suficiente para resistir el trabajo mas pesado a que pueden someterse. Este detalle acondiciona a estos mezcladores para construcciones que demanden un servicio continuo y efectivo.

Mescladores Ligeros, Tipo "Dandie"

Los mezcladores "Dandie," fig. 6 y 7 son ligeros, portátiles, y muy apropiados para trabajos que requieren estas características, como acontece en el caso de construcciones de aceras, alcantarillas, etc.

Aparatos para Cortar Barras

Estos aparatos, fig. 8, son muy útiles para cortar barras para reforzar hormigón. Son muy ligeros, de fácil manejo y de construcción muy sencilla. Se hacen en dos tamaño mayor, con ayuda de dos hombres puede cortar barras hasta de 1½ pulg.

Dobladores de Barras

Los dobladores de barra de construcción Koehring, fig. 11, son de acero en su totalidad. Se hacen en dos tamaños: el menor es para doblar barras hasta de 1 pulg. (25 mm.). El tamaño mayor es para barras hasta de 1½ pulg. (38 mm.).

Máquina Rotativa para Hacer Caminos

Máquina consiste de un cilindro que corta la pendiente y eleva la tierra suelta descargándola enseguida en los carros. Goza de mucha popularidad entre los contratistas y constructores de carreteras.

FABRICANTES DE MACHINAS PARA FAZER CONCRETO

Machinas para Cortar e Envergar Barras de Ferro e Rotativas para Remover Calçamentos Velhos.

Organização e Progresso

A Koehring Machine Company, foi organizada em 1907 e hoje em dia é a maior fabrica do mundo que se dedica exclusivamente ao fabrico de machinas desta classe. Dispoem de um enorme sortimento em stock, para satisfazer immediatamente os pedidos urgentes de seus freguezes.

Tamanhos e Tipos das Machinas de Misturar "Koehring"

Estas machinas acham-se divididas em duas classes geraes, a saber: para serviços pesados e serviços ligeiros. As primeiras são feitas em dois tamanhos com a sua capacidade variando de 7-10-14-21 e 28 pés³ (0,2-0,4-0,6-0,8 m³) de concreto, molhado, por cada carga e as ultimas com duas capacidades de 4 e 7 pés³ (0,1 0,2 m³).

Qualquer um destes dois tipos, poderá ser fornecido com dispositivos de carregar, tegão ou carregadores accionados a força motriz e montado sobre carros. Poderá também ser fornecido com machina a vapor e caldeira, motores a gasolina ou electricos ou arranjado para ser accionado por correa ou rodas dentadas.

As machinas "Koehring" são de construção muito forte e obedecem aos principios mais technicos que existem, até mesmos nas suas partes de menor importancia.

O grande desenvolvimento que tem tomado as construcções de cimento armado, exigiram que as machinas para este fim, adaptem-se aos innumerables problemas relativos a mão de obra e rapidez de serviço. A mistura conseguida nas nossas machinas de misturar concreto, não somente contem a propria quantidade do material, como também, a exacta porção dagua. São suppridas de um tanque dagua, que automaticamente mede a quantidade dagua para cada carga.

No texto inglez illustramos alguns dos tipos mais conhecidos das nossas machinas.

A Tabella I, especifica as informações precisas sobre as machinas "Koehring" para serviços pesados de misturar concreto; para construcções de calçamentos e serviços ligeiros. Nella encontram-se os seguintes dados: No. das machinas, capacidade por carga, em pés e metros cubicos de material misturado e sem misturar. Abaixo desta tabella, damos os dados para as machinas de envergar barras de ferro.

Machinas Koehring para Cortar e Envergar Barras de Ferro

Estas, são illustradas no texto inglez pelas Figs. 8 e 11 respectivamente. São de uma construção extraordinariamente forte e facéis de se manejar. Fornecemol-as em diferentes capacidades.

Machinas "Koehring" para Remover Calçamentos

Estas machinas, Fig. 10, formam uma unidade por si mesmo. Locomoção propria e simultaneamente levanta e carrega o calçamento removido para dentro das carroças.

BETONNIERES

Bétonnières, Bétonnières pour Chaussées, Machines à Cintrer et Couper les Barres, Défonceuses de Routes.

Organisation

La Koehring Machine Company est la maison la plus importante des Etats-Unis pour la construction des bétonnières (fig. 1). Elle peut fournir les machines les plus modernes pour les applications actuelles du béton.

Bétonnières Koehring

La Koehring Machine Company construit un type de bétonnière grand modèle et un type plus léger pour petits travaux. Ces bétonnières peuvent être livrées avec manche et trémie de chargement ou avec caisse basculante manoeuvrée au moteur.

Les bétonnières pour chaussées se font à chargement et déchargement er bout, avec plan incliné et bac ou goulotte de distribution. La charge est approvisionnée par une trémie basculante ou par une grue qui prend les bennes sur les tombereaux et les bascule dans la trémie.

Bétonnières Grand Modèle

Elles se font pour charges de 0,2-0,3-0,4-0,6 et 0,8 mètre cube de béton. Elles sont étudiées dans les moindres détails pour obtenir une grande vitesse de production sans avarie, elles donnent un béton de composition et de résistance uniformes.

La quantité d'eau admise est contrôlée par un bac jaugeur automatique Koehring (fig. 2). De plus, un compteur de charge ferme automatiquement la sortie du béton aussitôt que commence la charge du tambour. Les bétonnières sont cataloguées suivant le débit en béton préparé par charge.

La figure 3 représente une bétonnière produisant 0,8 m³ de béton, la figure 4 représente le modèle de 0,6 m³ avec machine à vapeur et chaudière, l'ensemble est monté sur roues et la figure 5 représente le modèle de 0,4 m³ avec moteur à essence, l'ensemble est monté sur roues.

Bétonnières Légères "Dandie"

Elles sont légères et facilement transportables, utilisées pour travaux courants tels que caniveaux, fondations, trottoirs, etc. Elles peuvent se charger à la brouette en installant une petite plate-forme comme le représente la figure 7. Elles se font de 0,1 et 0,2 m³ de capacité.

Bétonnières pour Chaussées

Ces machines sont d'une construction robuste et à grande production comme les bétonnières fixes. La figure 9 représente une de ces machines.

Machines à Cintrer et Couper les Barres

Ces machines, représentées fig. 11 et fig. 8, sont des plus utiles dans les travaux de construction en ciment armé, le travail est fait à la main, un homme et parfois deux, suffisent pour le travail des barres.

Défonceuse de Routes

Cette machine pourvue d'un moteur pour marche avant et arrière peut creuser la forme d'une route sur une épaisseur variable à volonté de 25 à 610 mm. et 1,70 m. de largeur. Le terrain est creusé par 12 godets dentés de forme hélicoïdale montés sur un cylindre rotatif.

БЕТОНОМЪШАЛКИ.

Бетономъшалки; мъшалки для настила бетономъ улиц и дорогъ; машины для рѣзки и сгибания арматуры; ротационные экскаваторы для дорогъ.

Размѣры и типы бетономъшалокъ Кэрингъ.

Миксеры изготовляются двухъ типовъ: большой и малой производительности, послѣдніе носятъ названіе „Денди“. Первые имѣютъ барабаны вмѣстимостью въ 7, 10, 14, 21 и 28 куб. фт., а вторые въ 4 и 7 куб. фт. (перемѣшаннаго бетона).

Эти миксеры могутъ быть снабжены желобомъ, воронкой и механическимъ загрузочнымъ приспособленіемъ на тележкѣ или рамѣ, а также двигателемъ паровымъ (съ котломъ или безъ него), бензиновымъ или электрическимъ. Приводъ можетъ быть непосредственный отъ двигателя или ременный.

Заводъ изготовляетъ бетономъшалки съ 1907 года и является однимъ изъ наибольшихъ въ мірѣ по своей спеціальности.

Таблица I даетъ производительность машинъ Кэрингъ.

Фиг. 1. — Заводъ Компаніи Кэрингъ.

Фиг. 2. — Автоматическій измѣрительный бакъ.

Фиг. 3—5. — Бетономъшалки №№ 28-S, 21-S и 14-S.

Фиг. 6 и 7. — Миксеръ „Денди“ № 104-S.

Фиг. 8. — Разрѣзатель прутьевъ для арматуры.

Фиг. 9. — Мъшалка для настила бетономъ улицъ.

Фиг. 10. — Ротационный экскаваторъ для дорогъ.

Фиг. 11. — Сгибатель прутьевъ.

Особеннос и бетономъшалокъ Кэрингъ.

Онѣ отличаются выдающейся прочностью и надежностью въ работѣ. Конструкция барабана для перемѣшиванія такова, что бетонъ получается совершенно однороднымъ по составу. Количество воды автоматически контролируется измѣрительнымъ бакомъ, а особое приспособленіе не позволяетъ барабану опорожниться пока намѣченное время для процесса смѣшиванія не истекло.

Ротационные экскаваторы для дорогъ. (Фиг. 10).

Это сильная машина, которая передвигаясь вдоль намѣченнаго пути автоматически выбираетъ почву до требуемой глубины, подымаетъ землю и грузитъ ее въ повозки движущіяся рядомъ. Почва выбирается вращающимся цилиндромъ съ двѣнадцатью черпаками, опоражнивающимися на конвейеръ.

Глубина вѣза можетъ быть отъ одного до 24 дм., ширина — 5 фут. 7 дм. Производительность — 50—75 куб. метровъ въ часъ. Всѣ операціи производятся однимъ человекомъ. Имѣется 4 скорости передвиженія.